PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| Applicant's or agent's file reference | FOR FURTHER | see Form PCT/ISA/220 | |
|--|--|---|----------|
| Jq-2961-PCT | ACTION | as well as, where applicable, item 5 below. | |
| International application No. | International filing date (day/month | (Earliest) Priority Date (day/month/year) | ar) |
| PCT/GB2004/001607 | 09/04/2004 | . 14/04/2003 | |
| Applicant | | | |
| SELSDON, Leslie Donald | | | • |
| SELEDON, LESTIE DONAID | | | |
| This International Search Report has been according to Article 18. A copy is being tra | n prepared by this International Sear ansmitted to the International Bureau | rching Authority and is transmitted to the applicant J. | |
| This International Search Report consists | of a total ofshe | ets. | |
| | a copy of each prior art document of | | |
| | | | |
| Basis of the report a. With regard to the language, the language in which it was filed, units the second | international search was carried out less otherwise indicated under this it | on the basis of the international application in the tem. | |
| 1 , , | search was carried out on the basis | of a translation of the international application furn | ished to |
| 1 | , ,, | e disclosed in the international application, see Box | : No. I. |
| 2. Certain claims were fou | ind unsearchable (See Box II). | | |
| 3. Unity of invention is lac | king (see Box III). | | |
| 4. With regard to the title, | | | |
| | ubmitted by the applicant. | | |
| | shed by this Authority to read as follo | ows: | |
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| 5. With regard to the abstract, | chaniste of her the energy | | |
| 1 <u></u> | submitted by the applicant. | this Authority as it annears in Roy No. IV. The anni | licant |
| the text has been establi may, within one month fr | om the date of mailing of this interna | this Authority as it appears in Box No. IV. The appl ational search report, submit comments to this Auth | nority. |
| 6. With regards to the drawings, | | | |
| a. the figure of the drawings to be | | NO | |
| X as suggested by | | | |
| <u> </u> | his Authority, because the applicant | | |
| | his Authority, because this figure bet | uer characterizes the invention. | |
| b none of the figures is to | be published with the abstract. | | |

INTERNATIONAL SEARCH REPORT

International Application No PCT/GB2004/001607

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C10M175/00 F16N39/06 B01D39/20 B01J20/20

Accurding to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 $\begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{C10M} & \mbox{F16N} & \mbox{B01D} & \mbox{B01J} \\ \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

| C. DOCUM | ENTS CONSIDERED TO BE RELEVANT | |
|------------|---|-----------------------|
| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | US 5 679 251 A (JOHNSON CHARLES W ET AL) 21 October 1997 (1997-10-21) column 1, line 40 - column 4, line 30; figures 1-6 | 1-22 |
| X | EP 0 416 908 A (EXXON RESEARCH ENGINEERING CO) 13 March 1991 (1991-03-13) column 1, line 12 - line 54 column 4, line 51 - column 5, line 17 column 5, line 40 - column 7, line 29; figures 1,2 | 1-22 |
| X | US 5 225 081 A (BROWNAWELL DARRELL W) 6 July 1993 (1993-07-06) column 1, line 58 - column 2, line 12 column 2, line 53 - line 61 column 12, line 52 - column 13, line 41; figures 5,6; example 1 -/ | 1-22 |

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|---|---|
| Further documents are listed in the continuation of box C. | Patent family members are listed in annex. |
| Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family |
| Date of the actual completion of the international search | Date of mailing of the international search report |
| 1 September 2004 | 08/09/2004 |
| Name and mailing address of the ISA | Authorized officer |
| European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 | Cubas Alcaraz, J |

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB2004/001607

| | tion) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|-----------------------|
| (| US 4 645 597 A (WADA YONEJI) 24 February 1987 (1987-02-24) column 2 line 43 - line 51 | 1-22 |
| | column 4, line 20 - line 38; figures 1,9 | |
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/GB2004/001607

| Patent document cited in search report | | Publication date | | Patent family member(s) | Publication date |
|--|-----|------------------|--------|-------------------------|------------------|
| US 5679251 | Α | 21-10-1997 | NONE | | |
| EP 0416908 | Α | 13-03-1991 | US | 5069799 A | 03-12-1991 |
| LI 0410300 | ••• | 20 00 200 | ΑÜ | 638053 B2 | 17-06-1993 |
| | | | AU | 6219190 A | 14-03-1991 |
| | | | BR | 9004416 A | 10-09-1991 |
| | | | CA | 2024008 A1 | 08-03-1991 |
| | | | EP | 0416908 A2 | 13-03-1991 |
| | | | JP | 3174207 A | 29-07-1991 |
| | | | JP | 3238699 B2 | 17-12-2001 |
| | | | MX | 9203192 A1 | 31-03-1994 |
| | | | US | 5225081 A | 06-07-1993 |
| US 5225081 A | | 06-07-1993 | US | 5069799 A | 03-12-1991 |
| •• •• | | | AU | 2262692 A | 25-01-1993 |
| | | | CA | 2110179 A1 | 07-01-1993 |
| | | | ΕP | 0593586 A1 | 27-04-1994 |
| | | | MX | 9203192 A1 | 31-03-1994 |
| | | | WO | 9300416 A1 | 07-01-1993 |
| | | | ΑU | 638053 B2 | 17-06-1993 |
| | | | AU | 6219190 A | 14-03-1991 |
| | | | BR | 9004416 A | 10-09-1991 |
| | | | CA | 2024008 A1 | 08-03-1991 |
| | | | EP | 0416908 A2 | 13-03-1991 |
| | | | JP | 3174207 A | 29-07-1991 |
| | | | JP | 3238699 B2 | 17-12-2001 |
| US 4645597 | Α | 24-02-1987 | JP | 60261520 A | 24-12-1985 |
| | | | JP | 1459575 C | 28-09-1988 |
| · | | | JP | 61000420 A | 06-01-1986 |
| | | | JP | 63007809 B | 18-02-1988 |
| | | | JP | 1025607 B | 18-05-1989 |
| | | | JР | 1543436 C | 15-02-1990 |
| | | | JP | 61118109 A | 05-06-1986 |
| | | | EP | 0167301 A2 | 08-01-1986 |
| | | | KR | 8900460 B1 | 18-03-1989 |